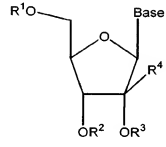
AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are or were in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier.

1-32. (Canceled)

33. (Currently Amended) A method for treating a hepatitis C virus infection in a host, comprising (a) administering an effective amount of a 2'-branched nucleoside of the formula:



or a pharmaceutically acceptable prodrug or salt thereof to the host, wherein

R^1 and R^2 are independently H; mono, di or triphosphate; acyl; sulfonate ester; benzyl; an amino acid ester; a carbohydrate; a peptide; a cholesterol or a pharmaceutically acceptable leaving group that provides a compound wherein R^1 or R^2 is independently H or phosphate when administered *in vivo*;

R^3 is hydrogen;

R^4 is alkyl, alkenyl, or alkynyl; and

Base is a pyrimidine;

(b) identifying viral resistance to the 2'-branched nucleoside in the host; and ~~optionally in a pharmaceutically acceptable carrier or diluent, in combination and/or alternation with~~ (c) administering to the host infected with the virus resistant to the 2'-branched nucleoside, an effective amount of one or more drugs that directly or indirectly induce a mutation in a hepatitis C virus at a location other than a mutation of a nucleotide that results in a change from serine to a different amino acid in the highly conserved consensus sequence, XRXSGXXXT (Sequence ID No. 63), of domain B of the RNA polymerase region.

34. (Previously Presented) The method of claim 33 wherein the drug is a drug that directly or indirectly induces or is associated with a mutation in a hepatitis C virus at a location other than nucleotide 8443 (G to C) of the HCV genome or 282 Ser to Thr of the RNA polymerase region of HCV.

35.-37. (Canceled)

38. (Previously Presented) The method of claim 33, wherein the 2'-branched nucleoside is β-D-2'-CH_3-riboC, or a phosphate thereof, or a pharmaceutically acceptable salt or ester thereof.

39. (Previously Presented) The method of claim 33, wherein the 2'-branched nucleoside is a 3'-amino acid prodrug of β-D-2'-CH_3-riboC.

40. (Previously Presented) The method of claim 39, wherein the 2'-branched nucleoside is a 3'-L-valinyl prodrug of β-D-2'-CH_3-riboC.

41. – 86. (Canceled).

87. (Previously Presented) The method of claim 33, wherein R^1 is a mono, di or triphosphate.

88. (Canceled).

89. (Previously Presented) The method of claim 33, wherein R^2 is an amino acid ester.

90. (Canceled).

91. (Canceled).

92. (Previously Presented) The method of claim 33, wherein R^4 is methyl.

93.-100. (Canceled).

101. (Previously Presented) The method of claim 33, wherein R^2 is an ester of a naturally occurring or synthetic α, β, γ, or δ amino acid.

102. (Canceled).

103. (Previously Presented) The method of claim 33, wherein R^2 is an ester of valine.

104. (Previously Presented) The method of claim 33, wherein
R^4 is methyl;
R^2 is acyl or an amino acid ester;
R^3 is H; and
R^1 is H.

105. (Previously Presented) The method of claim 104, wherein R^2 is an amino acid ester.

106. (Previously Presented) The method of claim 104, wherein R^2 is an ester of valine.

107. (Currently Amended) The method of any one of claim 33~~, 34, 48, or 104~~ wherein host is human.

108. (Canceled).

109. (New) The method of claim 33, wherein the 2'-branched nucleoside is in a pharmaceutically acceptable carrier or diluent.

110. (New) The method of claim 33, wherein the drug in step (c) is interferon.

111. (New) The method of claim 33, wherein identifying viral resistance in step (b) comprises assaying the blood of the host to test for seroconversion from wildtype to mutant hepatitis C virus.

112. (New) The method of claim 33, wherein identifying viral resistance in step (b) comprises phenotypic analysis of viral plaque growth from a viral culture sample from the host.

113. (New) The method of claim 112, wherein the phenotypic analysis of step (b) comprises

(i) obtaining a viral culture sample from the host;

(ii) culturing the sample and comparing the plaque growth between the sample and wild type virus; and

(iii) determining whether the plaque growth of the sample is smaller than the plaque growth of the wildtype virus.

114. (New) The method of claim 33, wherein identifying viral resistance in step (b) comprises determination of the replication fitness of the virus.

115. (New) The method of claim 114, wherein determination of the replication fitness of the virus in step (b) comprises

(i) obtaining a viral culture sample from the host;

(ii) determining the replication fitness of the sample virus; and

(iii) determining whether the replication fitness of the sample virus is less than the replication fitness of the wildtype virus.

116. (New) The method of claim 33, wherein identifying viral resistance in step (b) comprises detecting the presence of cytidine at nucleotide 8443 of the RNA polymerase region of the hepatitis C virus.

117. (New) The method of claim 33, wherein identifying viral resistance in step (b) comprises

(i) contacting a sample containing a hepatitis C virus nucleic acid sequence with a detectable oligonucleotide probe having a sequence complementary a codon that encodes a serine in the highly conserved consensus sequence, XRXSGXXXT, of domain B of the RNA polymerase region of the hepatitis C virus;

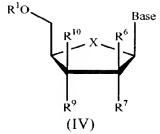
(ii) allowing the probe to hybridize to the sequence; and

(iii) detecting the hybridization of the probe the sequence.

118. (New) A method of treating a hepatitis C virus infection in a host infected with a hepatitis C virus that contains a mutation at the serine residue in the highly conserved consensus sequence, XRXSGXXXT (Sequence ID No. 63), of domain B of the RNA polymerase region, comprising administering to the host infected with said virus an effective amount of one or more drugs that directly or indirectly induce a mutation in a hepatitis C virus at a location other than a mutation of a nucleotide that results in a change from serine to a different amino acid in the highly conserved consensus sequence, XRXSGXXXT (Sequence ID No. 63), of domain B of the RNA polymerase region.

119. (New) The method of claim 117, wherein the drug is interferon.

120. (New) A method for treating a hepatitis C virus infection in a host, comprising (a) administering an effective amount of a 2'-branched nucleoside of formula IV:



(IV)

or a pharmaceutically acceptable prodrug or salt thereof to the host, wherein:

Base is a pyrimidine;

R^6 is alkyl, CH_3, CF_3, azido, cyano, alkenyl, alkynyl, Br-vinyl, 2-Br-ethyl, -C(O)O(alkyl), -C(O)O(lower alkyl), -O(acyl), -O(lower acyl), -O(alkyl), -O(lower alkyl), -O(alkenyl), CF_3, fluoro, chloro, bromo, iodo, NO_2, NH_2, -NH(lower alkyl), -NH(acyl), -N(lower alkyl)$_2$, -N(acyl)$_2$;

R^7 is OR^2, hydroxy, alkyl, azido, cyano, alkenyl, alkynyl, Br-vinyl, halo-vinyl, -C(O)O(alkyl), -C(O)O(lower alkyl), -O(acyl), -O(lower acyl), -O(alkyl), -O(lower alkyl), -O(alkenyl), fluorine, chlorine, bromine, iodine, NO_2, NH_2, -NH(lower alkyl), -NH(acyl), -N(lower alkyl)$_2$, -N(acyl)$_2$;

R^9 is hydrogen, OR^3, hydroxy, alkyl, azido, cyano, alkenyl, alkynyl, Br-vinyl, -C(O)O(alkyl), -C(O)O(lower alkyl), -O(acyl), -O(lower acyl), -O(alkyl), -O(lower alkyl), -O(alkenyl), chlorine, bromine, iodine, NO_2, NH_2, -NH(lower alkyl), -NH(acyl), -N(lower alkyl)$_2$, -N(acyl)$_2$;

R^{10} is H, alkyl, fluorine, chlorine, bromine or iodine;

R^1, R^2 and R^3 are independently H, phosphate; straight chained, branched or cyclic alkyl; acyl; CO-alkyl, CO-aryl, CO-alkoxyalkyl, CO-aryloxyalkyl, CO-substituted aryl, sulfonate ester; benzyl, wherein the phenyl group is optionally substituted with one or more substituents as described in the definition of aryl given herein; alkylsulfonyl, arylsulfonyl, aralkylsulfonyl, lipid; amino acid; carbohydrate; peptide; cholesterol; or a pharmaceutically acceptable leaving group that provides a compound wherein R^1, R^2 or R^3 is independently H or phosphate when administered *in vivo*; and

X is O, S, SO_2 or CH_2;

(b) identifying viral resistance to the 2'-branched nucleoside in the host; and

(c) administering to the host infected with the virus resistant to the 2'-branched nucleoside, an effective amount of one or more drugs that directly or indirectly induce a mutation in a hepatitis C virus at a location other than a mutation of a nucleotide that results in a change from serine to a different amino acid in the highly conserved consensus sequence, XRXSGXXXT (Sequence ID No. 63), of domain B of the RNA polymerase region.

121. (New) The method of claim 33, wherein the compound according to the formula is administered.

122. (New) The method of claim 120, wherein the compound according to Formula IV is administered.